1. Text

   Description automatically generated
2. Text

   Description automatically generated
3. Text, letter

   Description automatically generated
4. Text, letter

   Description automatically generated

This count is likely off because the source does not radiate in one direction so the sensor will not be able to detect all of the alpha particles emitted by the source.

1. Text, letter

   Description automatically generated
2. Text

   Description automatically generated

11.2 sheets of 2.5μm mylar will result in the alpha particle having 0 energy when it reaches the detector. The number of mylar sheets that will result in an inability to detect the alpha particles will be lower than this because of the noise threshold.

9. Logo, company name

Description automatically generatedLogo, histogram

Description automatically generatedChart, histogram

Description automatically generatedChart, histogram

Description automatically generatedChart, histogram

Description automatically generatedChart, histogram

Description automatically generatedChart, histogram

Description automatically generatedChart, histogram

Description automatically generatedA picture containing shape

Description automatically generatedA picture containing shape

Description automatically generated

For 7 mylar sheets and up the fit fails because the peak shifts into the noise region where data was exluded so the fit function can not produce a good fit as half the data is missing.

10. Chart, scatter chart

Description automatically generated

If the graph is extrapolated to 0, meaning the air is not in between the detector and source, then the known full energy of the alpha particle would be obtained. As more mylar sheets are added, the energy of the dectected alpha particles decreases. In this region the realtion apears to be linear.

11.

Chart, scatter chart

Description automatically generated

The measured data apears to have the same shape as the theoretical data, but the amplidute is significantly lower. This implies that the alpha particles are losing siginifcantly more than the predicted energy loss as it passes through the mylar sheets and air. This could be bacuse of some interaction when it changes medium or the mylar sheets may be thicker than reported. The shets were not taught and had some wrinkles. This would make the effective thickness of the sheets larger than the thickness of the sheet. Thus the ploted energy vs thickness of mylar graph would be compressed horizontally, increasing the slope and stopping power with it.